

Appl. No. 09/825,200
Amdt. Dated May 6, 2004
Reply to Office Action of February 6, 2004

Attorney Docket No. 81800.0153
Customer No. 26021

REMARKS/ARGUMENTS

In response to the Office Action dated March 6, 2003, which was made final, claims 1, 9, and 17 are amended. Claims 1-24 remain in the application. It is not the Applicants' intent to surrender any equivalents because of the amendments or arguments made herein. Reconsideration of the application and entrance of these amendments are respectfully requested.

Applicant believes the foregoing amendments comply with requirements of form and thus may be admitted under 37 C.F.R. § 1.116(a). Alternatively, if these amendments are deemed to touch the merits, admission is requested under 37 C.F.R. § 1.116(b). In this connection, these amendments were not earlier presented because they are in response to the matters pointed out for the first time in the Final Office Action.

Lastly, admission is requested under 37 C.F.R. § 1.116(a) as presenting rejected claims in better form for consideration on appeal.

Non-Statutory Objections

In paragraph 2 of the Office Action, claim 1 was objected to because of a claim term informality.

The Applicants thank the Examiner and have amended the claims as requested in the Office Action.

Art-Based Rejections

In paragraph 3 of the Office Action, claims 1-24 were rejected under 35 U.S.C. § 103(a) as being anticipated by Soumiya et al., USPN 5,761,217 in view of Yoshida, USPN 6,046,825.

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The Applicant respectfully traverses the rejections, however, in order to expedite prosecution, the Applicants have amended the claims for clarification. The Applicants respectfully submit that the claims are patentable in light of the clarifying amendments above and the arguments below.

The Soumiya Reference

The Soumiya reference discloses a method for recovering errors with data communication. A CPU 1 controls the operations of the entire facsimile device. ROM 2 stores the programs and the like necessary for the operations of the CPU 1. RAM 3 temporarily memorizes various types of information of the received data and the like. NCU 4 controls the connection to the telephone lines. Modem 5 carries out modulation of image data to be transmitted and demodulation of received image data. See Col. 3, line 66-Col. 4, line 8.

The modem 5 carries out modulation in accordance with a multi phase differentially encoded modulation method of recommendation V.27ter of the ITU. See Col. 4, lines 15-18. The CPU 1 includes an error recovery means. When an error line is detected during decoding of the coded data, the error recovery means corrects the error line and recovers the correct line data. In concrete terms, data of error correction patterns as shown in FIG. 7A/B are pre-memorized in the ROM 2. See Col. 6, lines 40-45.

The Yoshida Reference

The Yoshida reference discloses a facsimile apparatus controlling communication in accordance with registered execution of the error correction mode. The modem 8 modulates the coded data supplied from the control circuit via

the signal line 20b to generate a modulated signal and also demodulates the received signal taken from the hybrid circuit 6 via a signal line 6a to generate demodulated data. The modulation and demodulation processes are conducted in accordance with the ITU-T Recommendations V.21, v.27ter, v.29, v.17, v.8, and v.34. The contents of the modulation and demodulation processes by the modem 8 are instructed by the signal supplied by the control circuit 20 through a signal line 20c and the transmission mode is determined by the instructed modulation and demodulation processes. The signals supplied from the control circuit 20 to the modem 8 through the signal line 20c are those for specifying the transmission mode, the reception mode, and the transmission speeds. See Col. 2, line62-Col. 3, line 9.

The registered information may comprise information indicative of the execution of the ECM for the transmission speeds. Because of the possibility of poor line conditions, it is determined that the communication at the transmission speeds of 14.4 Kb/s and 12 Kb/s is allowed when a check result indicates a good line condition, and the ECM communication is conducted at those speeds. If the check result indicates a bad line condition, it is determined that the communication is permitted at the transmission speeds of 9.6 Kb/s or below and the normal communication without the ECM added is conducted to prevent the extension of the communication time due to the data retransmission by the ECM communication. See Col. 4, lines 24-39.

The Claims are Patentable over the Cited Reference

The claims of the present invention describe a communication terminal device having an error correction function. A device in accordance with the present invention comprises a modem that can transmit data to a remote device in accordance with a plurality of modulation methods and communication speeds, and a controller for changing a current modulation method of the modem to a different

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modulation method while maintaining a communication speed when an all-frame-error is detected predetermined number of times during data transmission, and for maintaining the current modulation method and reducing the communication speed when a frame error other than the all-frame-error is detected a second predetermined number of times.

The cited references do not teach nor suggest the limitations of the claims of the present invention. Specifically, the cited references do not teach nor suggest at least the limitation of a controller for changing a current modulation method of the modem to a different modulation method while maintaining a communication speed when an all-frame-error is detected predetermined number of times during data transmission, and for maintaining the current modulation method and reducing the communication speed when a frame error other than the all-frame-error is detected a second predetermined number of times as recited in the claims of the present invention.

The Office Action admits that Soumiya does not explicitly teach a controller that changes a current modulation to a different modulation scheme. See Office Action, page 4, lines 21-22. Yoshida is cited for disclosing changing the modulation scheme.

However, neither reference, alone or in combination, teaches changing the modulation scheme while maintaining the communication speed for an all-frame error, while performing a different function, namely, maintaining the modulation method and reducing the communication speed for other types of detected errors as recited in the claims of the present invention. Even if Yoshida teaches changing modulation schemes, Yoshida does not discuss changing a different characteristic of the transmission, namely, the communication speed. Neither reference discusses performing one change for a first type of event (an all-frame error) and performing a different change for a second type of event (other types of errors).

These recitations allow the present invention to perform at higher throughput speeds and give additional automatic capabilities which Yoshida and Soumiya do not allow for. As an example, and not by way of limitation, Yoshida and Soumiya are limited to changing the modulation scheme for any given detected error; the present invention provides additional intelligence on the type of error detected, and changes either the modulation scheme or the communication speed based on the type of error detected. None of the cited reference teach nor suggest such an approach.

Thus, it is submitted that independent claims 1, 9, and 17 are patentable over the cited references, because none of the cited references teach nor suggest at least the limitation of a controller for changing a current modulation method of the modem to a different modulation method while maintaining a communication speed when an all-frame-error is detected predetermined number of times during data transmission, and for maintaining the current modulation method and reducing the communication speed when a frame error other than the all-frame-error is detected a second predetermined number of times as recited in the claims of the present invention.

Further, claims 2-8, 10-16, and 18-24 are also patentable over the cited reference, not only because they contain all of the limitations of the independent claims, but because claims 2-8, 10-16, and 18-24 also describe additional novel elements and features that are not described in the prior art.

Conclusion

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

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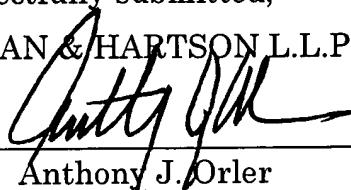
If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 337-6742 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,

HOGAN & HARTSON L.L.P.

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